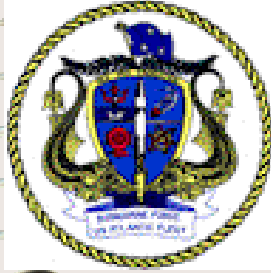


The image shows the front cover of a spiral-bound notebook. The cover has a brown border and a light beige, textured fabric-like center. On the left side, there is a silver-colored metal spiral binding. The text is printed in a dark brown, serif font, centered on the cover.

ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEM

NODORM/OP 61-17 UPDATE

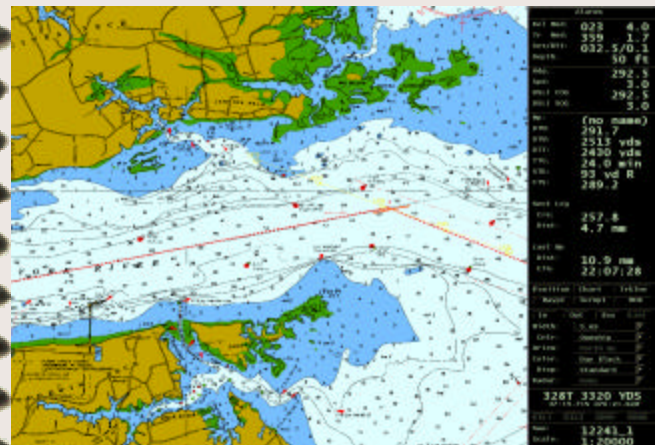
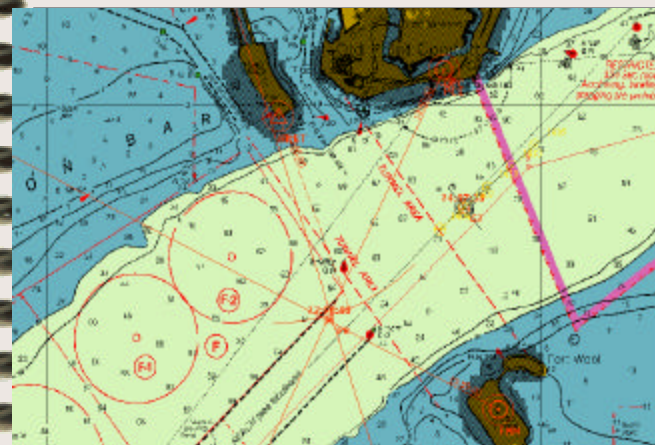
LCDR. Jim Miller
COMSUBLANT TRE TEAM



Electronic Chart Display and Information System (ECDIS)



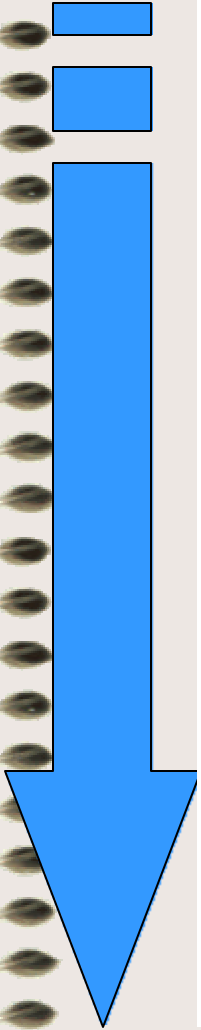
- Ø ECDIS is a commercial standard for electronic charting**
- Ø Defined by International Maritime Organization (IMO)**
- Ø Navigation Information System which, with adequate back-up arrangements, can be accepted as complying with the up-to-date chart requirements for the Safety of Life at Sea**

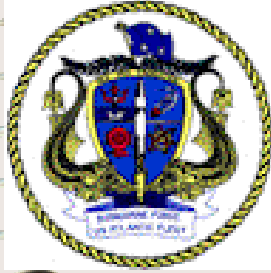


ECDIS-N: The Navy standard

- Ø Automated Continuous Positioning Systems**
- Ø Displays radar, visual and celestial navigation fix information**
- Ø Reads and displays National Imagery and Mapping Agency (NIMA) Digital Nautical Charts (DNCs)**
- Ø System-to-system interoperability**



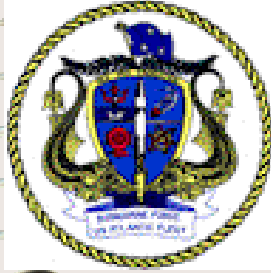
- 
- 1998 - ECDIS-N Policy letter signed
- 1999 - U.S. ratifies NATO WECDIS STANAG
- 2000 - **Fleet CINCs update DNC maintenance priorities**
- ECDIS-N certification 9420 INST signed
 - NAVSSI Blk III Build installed and tested
 - NIMA completes worldwide chart digitization
 - **Fleet CINCs submit Integrated Nav System MNS**
 - Joint Navy/Marine Corps PNT Policy signed 27 Jun 00
- 2001 - NAVSSI, CADRT, COTS systems pass OPTEST/ NAVCERT
- Implement NTSPs for ECDIS-N systems
 - NIMA validates DNC VDU process
 - **Fleet CINCs issue navigation policy; update nav standards**
- 2002 - **Fleet CINCs certify 1st ship safe for electronic navigation**
- 2004 - VIRGINIA Class Submarine - “Float Off”
- NIMA worldwide chart database is updated to current Notice to Mariners (navigation quality)
- 2007 - U. S. Navy goal for fleet wide electronic charting



Plan Of Attack



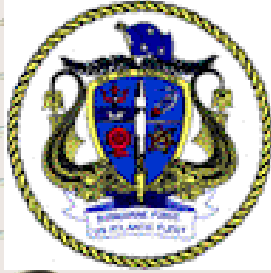
- SSM OP 61-17 (Navigation and Piloting Procedure) Revised by CSP TRE Team.
- NODORM Revised by SUBTRAFAC NORVA
- CSL N7 will review both to ensure consistent and accurate.



CSL N7 Navigation Cell



- Former XO in USS SEAWOLF.
- ETCM(SS), served ANAV, served Squadron ANAV.
- Former SUBLANT Assistant Force Navigator.

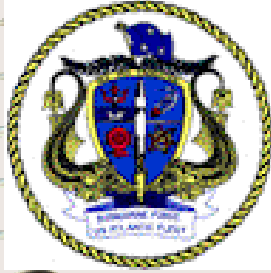


CSL N7 Navigation Cell



FOCUS ON ELECTRONIC NAVIGATION

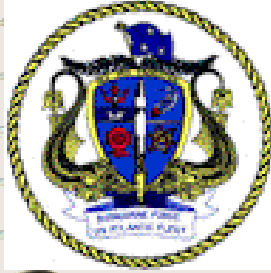
- Formed 4 Sept.
- Will review changes to NODORM and OP 61-17.
- Will review navigation training at all levels within the submarine force.



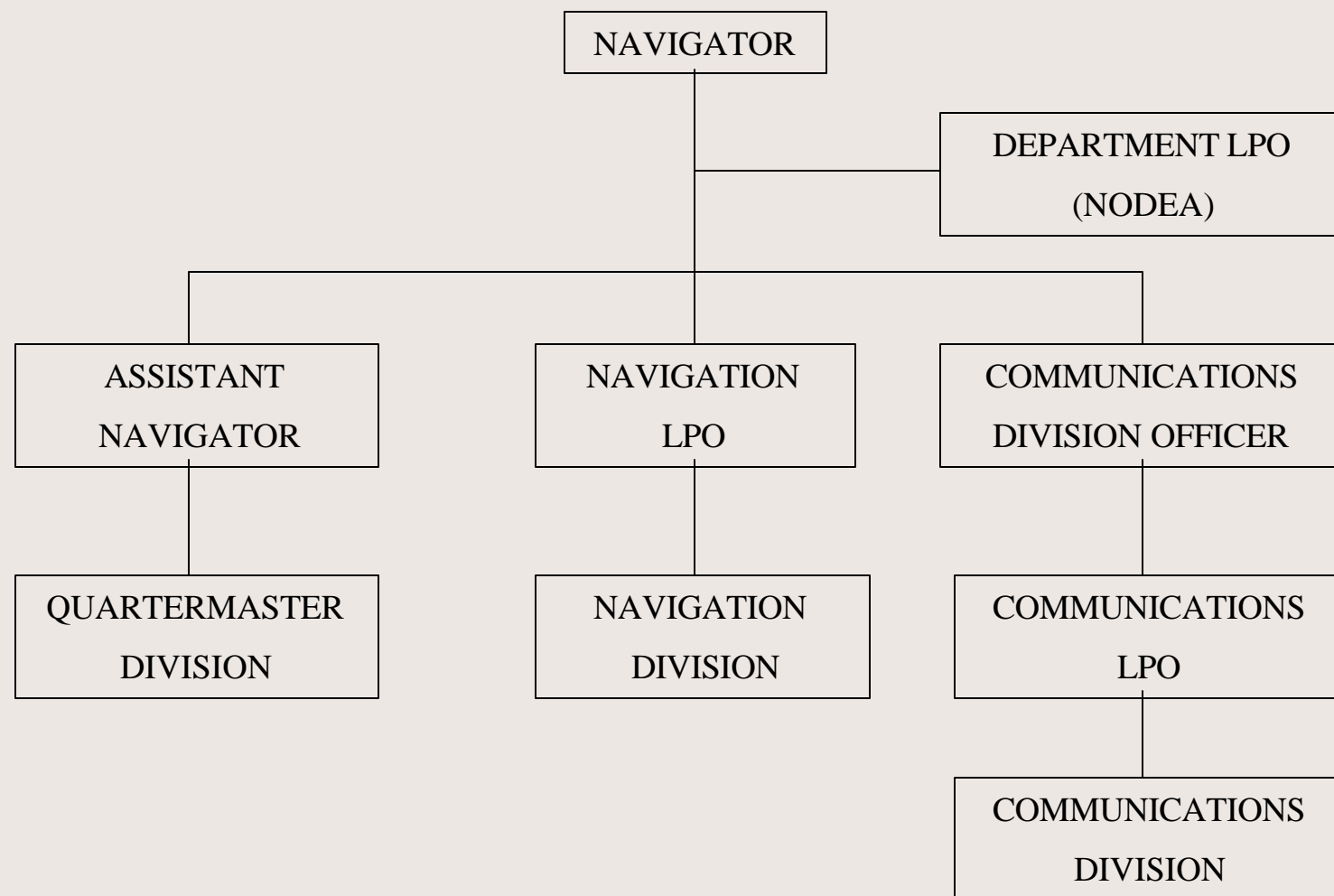
NODORM CHANGES

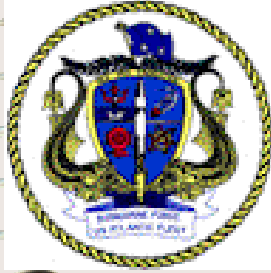


- All qualification cards updated to reflect new systems and standardize qualification on electronic navigation systems.
- Restore Quartermaster Division.
- We will keep QMOW and ETOW separate, for now.
- Modify wording on QMOW responsibilities.



NEW DEPARTMENT ORGANIZATION

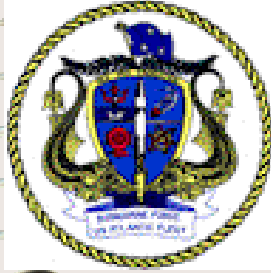




NODORM CHANGES



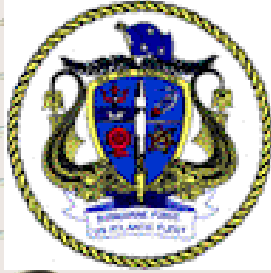
- Modify pre-underway checkoff list.
- Modify piloting preparations checklist.
- Modify planned operations checklist.
- Modify entering port checkoff List.
- Remove reference to plotting symbols.



NODORM CHANGES



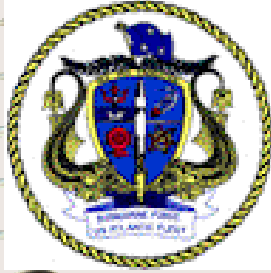
- Once a ship is certified for electronic navigation, remove the requirements for:
 - Position log.
 - Fathometer log.
 - Navigation workbook.
 - Chart cards.
- Modify chart maintenance procedures.
- Modify navigation evaluation checklist.



OP 61-17 CHANGES



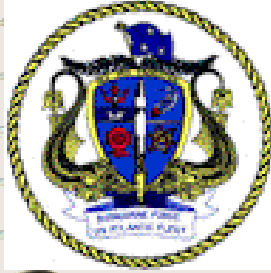
- Identifies procedure as “Electronic Navigation and Piloting Procedure”
- Describes its purpose as only to be used by BPS15/VMS ships
- Requires one Voyage Manager to be designated as primary VM plot and allows a secondary VM to be optional



OP 61-17 CHANGES



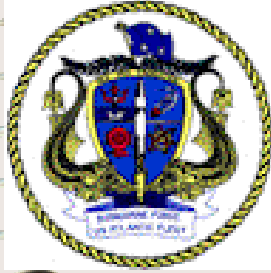
- Describes the use of Voyage Plan Editor for Voyage Planning
- Describes the functions of a VM Operator
- Requires primary and secondary fix sources to be evaluated on the VM
- Relieves the ships of the responsibility of maintaining a separate Radar Log



OP 61-17 CHANGES



- Describes the Sonar Supervisor's responsibilities in VMS navigation
- Defines Open Ocean Navigation Changes WRT
 - RLG/ESGN EP
 - Computer DR
 - VM Electronic DR(EDR) reset requirements
 - Requirements if EDR fails
- VMS System setup procedures and Safety Checker Operations (App A and B)



CONCLUSION



- VMS widely used by ships
- Training Support
- Procedural Support
- TRE TEAM ready to evaluate